

We claim:

1. A method to remove metals from an organic phase of a solution comprising the steps of:
 - a. contacting said organic phase with an aqueous solution of a stripping agent, wherein said stripping agent comprises an organic amine carbonate solution;
 - b. recovering the amine carbonate by distillation;
 - c. regenerating the amine carbonate solution;
 - d. recycling said organic amine carbonate solution beginning with step a).
2. The method of Claim 1 wherein said stripping agent is mixed with a complexant.
- 15 3. The method of Claim 1 wherein the amine of said organic amine carbonate solution is capable of forming an azeotropic mixture with water.
4. The method of Claim 1 wherein the amine of said organic amine carbonate solution is selected from the group consisting of methylamine, dimethylamine, morpholine, pyrrolidine, and pyridine
- 20 5. The method of Claim 2 wherein said complexant is selected from the group consisting of diethylenetriaminepentaacetic acid, nitrilotriacetic acid, and oxyethylidenediphosphonic acid.

6. The method of Claim 1 wherein the concentration of said organic amine carbonate solution is about 0.5M to about 4.0M.

7. The method of Claim 2 wherein the concentration of said complexant is about 0.002M to about 0.03M.

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8. The method of Claim 2 wherein

- a. said organic phase comprises chlorinated cobalt dicarbollide, substituted polyethylene glycol, diphenyl-N,N-dibutylcarbamoyl phosphine oxide, and phenyltrifluoromethylsulfone; and
- b. said organic amine carbonate solution comprises methylamine carbonate.

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9. The method of Claim 2 wherein

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- a. said organic phase comprises chlorinated cobalt dicarbollide, substituted polyethylene glycol, and metanitrobenzotrifluoride; and
- b. said organic amine carbonate solution comprises methylamine carbonate.

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10. The method of Claim 2 wherein

- a. said organic phase comprises chlorinated cobalt dicarbollide and nitrobenzene; and
- b. said organic amine carbonate solution comprises pyrrolidine carbonate.

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11. The method of Claim 2 wherein

- a. said organic phase comprises diphenyl-N,N-dibutylcarbamoyl phosphine oxide and phenyltrifluoromethylsulfone; and
- b. said organic amine carbonate solution comprises morpholine carbonate.

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12. The method of Claim 2 wherein

- a. said organic phase comprises at least one different-radical phosphine oxide and dodecane; and
- b. said organic amine carbonate solution comprises methylamine carbonate.

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13. The method of Claim 1 wherein

- a. said organic phase comprises diphenyl-N,N-dibutylcarbamoyl phosphine oxide and phenyltrifluoromethylsulfone; and
- b. said organic amine carbonate solution comprises methylamine carbonate.

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14. The method of Claim 1 wherein

- a. said organic phase comprises uranium nitrate, tributyl phosphate, and dodecane; and
- b. said organic carbonate solution comprises dimethylamine carbonate.

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15. A method to remove metals from an organic phase of a solution comprising the
steps of:

5 a. contacting said organic phase with an aqueous solution of a stripping
agent, wherein said stripping agent comprises an organic amine carbonate
solution;

10 b. evaporating said aqueous solution;

 c. distilling said organic amine as an azeotropic solution with water;

 d. bubbling carbon dioxide gas through said organic amine at a temperature
of between about 35°C to about 60°C to regenerate said organic amine
carbonate solution; and

 e. recycling said organic amine carbonate solution beginning with step a).